

Work Order ID 162542

162542

Page 1

Monday, June 05, 2017 9:30:32 AM

Item ID: D350-748-203 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: AS350 / AS355 Stainless Steel Aft Crosstube
 Start Date: 6/16/2017 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 6/30/2017 Req'd Qty: 1.00 ***1*** Customer:

Reference: **DAS**
 Approvals: Process Plan: **21** Date: **JUN 07 2017** Tooling: Date: Run Start ***NR1***
 QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr	DAS
D350-748-243	A	6 9-89 AUG 09 2017

100	Document Control	0.00							
100	DOCUMENT CONTROL								
DC	Memo	0.00							
Doc.Control -USB or Paperwork	Photocopy bluefile & type labels per PPPD350-748-201		CHG001						

110	BENDING MACHINE - CROSSTUBES	0.79							
110									
CNC Bend 2	Memo	1.12							
CNC Alpha 160 Bender	Bend tube as per Dwg D350-748-243 using CNC bender program D350A and Folio FT								
	*****UNDER BEND .225" PER SIDE*****								
	****USE (4) DT9824 SHIM BLOC TO CHECK STRAIGHTNESS****								

D350-748-203 / 162542

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
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127	QC15- Crosstube Dimensional Check	0.00							
127									
QC	Memo	0.00							
Quality Control	***MARK CUT LINES***								

128		0.00							
128									
Crosstubes	Memo	1.80							
Crosstubes	CUT TUBE AT HEIGHT ON FAI SHEET								

VERF HEIGHT 31.35 BY QC 15 LEVEL INSPECTOR JW
 VERF TWIST 0.260 BY QC15 LEVEL INSPECTOR JW

DP7 17-07-25

DAS
38
9-89
JUL 25 2017

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WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
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Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

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130		0.00							
130	Crosstubes								
Crosstubes	Memo	1.69							
Crosstubes	2- Drill Tube as per Dwg D350-748-243 Using DT8876 Drill Jigs, Set-up drill table as per QSI 010								
	3 -Deburr								
	4- Engrave Part # and Batch # as per Dwg D350-748-243								
	5-Remove all marks from tube within limits of D350-748-243								
140	QC5- Inspect part completeness to step on W/O	0.00							
140									
QC	Memo	0.00							
Quality Control									

GP 17-07-25

GP 17-07-25

DAS
38
9-89
JUL 27 2017

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174	Outsource process - NDT per QSI038 4.1	0.00							
174					DAS 13 9-89	1	AUG 11 2017		DOB 2017/08/28
Outsource2	Memo	48.00							
Outsource process - NDT	ISSUE P/O TO ACCUREN: <u>39253</u>								
176	Receive & Inspect for Damage & Mat'l Certs	0.00							
176									
Packaging	Memo	0.00							
Packaging									
178	QC5- Inspect part completeness to step on W/O	0.00							
178									
QC	Memo	0.00							
Quality Control									

IX SPN-7-31

DAS
38
AUG 08 2017

DQA: _____ Date: _____



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Work Order ID 162542

162542

Page 6

Monday, June 05, 2017 9:30:32 AM

Item ID: D350-748-203

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: AS350 / AS355 Stainless Steel Aft Crosstube

Stop *NS2*

Start Date: 6/16/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 6/30/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

190

QC14- Inspect Spray Paint

0.00

190

QC

Quality Control

Memo

0.00

Then, Wrap in plastic bag to protect from scratches

***VERIFY BY 38 BATCH # TO MATCH W/O

***VERIFY BY 38 PART # TO MATCH

W/O 162542

DAS

38

9-89

AUG 08 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
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Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Work Order ID 162542***162542***

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Monday, June 05, 2017 9:30:32 AM

Item ID: D350-748-203

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: AS350 / AS355 Stainless Steel Aft Crosstube

Stop

NS2

Start Date: 6/16/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 6/30/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

200

0.00

200

Crosstubes

Crosstubes

Memo

0.56

INSTALL GROUND WIRE INSERT, THEN INSERT SCREW AND WASHER

***LIMIT AIR PRESSURE TO 50 PSI WHEN INSTALLING AETC-1032
INSERT AND ONLY EXPAND INSERT ONCE***1-Abrade mating surfaces of support and crosstube with 180 grit sandpaper,
clean the area with MEK or equivalent as per dwg

2-Install supports with Proseal 890 per D350-748-243 and QSI 015

A/R Proseal 890

Batch: 137495EXP: 1/183-Install supports clamps Using Dt8876 as per Dwg D350-748-243, Torque to
60-80 IN-LBS.

PROSEAL CURE TIME 72 HOURS:

Start:

Finish:

17-8-2
17-8-3

AUG 02 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
☐ OTHER : _____					

Work Order ID 162542

162542

Page 8

Monday, June 05, 2017 9:30:32 AM

Item ID: D350-748-203 Accept *N900040100* Setup Start *NS1*
 Revision ID:
 Item Name: AS350 / AS355 Stainless Steel Aft Crosstube Stop *NS2*
 Start Date: 6/16/2017 Start Qty: 1.00 *1* Cust Item ID:
 Required Date: 6/30/2017 Req'd Qty: 1.00 *1* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210	QC5- Inspect part completeness to step on W/O	0.00							DAS 38 9-89
210									
QC	Memo	0.00							
Quality Control	***RE-CHECK TORQUE ON CLAMP AFTER PROSEAL HAS CURED FOR 72HOURS AS PER DWG.*** 38 ***VERIFY BY <u>162542</u> BATCH # TO MATCH W/O ***VERIFY BY <u>162542</u> PART # TO MATCH W/O <u>162542</u>								AUG 0 8 2017
220	Pick Kit	0.00							
220									
Packaging	Memo	0.00							
Packaging									

/ AUG 0 9 2017

DAS
27
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____			
Misidentified	☐	Past Due	☐				

Work Order ID 162542

Monday, June 05, 2017 9:30:32 AM

162542

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Item ID: D350-748-203 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID:
 Item Name: AS350 / AS355 Stainless Steel Aft Crosstube Stop ***NS2***
 Start Date: 6/16/2017 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 6/30/2017 Req'd Qty: 1.00 ***1*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230	QC4- 100% Inspect kits for completeness	0.00							
230									
QC	Memo	0.00							
Quality Control	***VERIFY BY <u>162542</u> DAS 28 9-89 BATCH # TO MATCH W/O								
	***VERIFY BY <u>162542</u> DAS 28 9-89 PART # TO MATCH								
	W/O <u>162542</u> DAS 28 9-89								
240	Identify as per dwg & Stock Location: <u>Fg035</u>	0.00							
240	Packaging								
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPPD350-748-203								
	Location: _____								
	PPP Rev: _____								
250	QC21- Final Inspection - Work Order Release	0.00							
250									
QC	Memo	0.00							
Quality Control									

DAS 28
9-89

AUG 10 2017

DAS 28
9-89

AUG 10 2017

DAS 21
9-89

AUG 11 2017

DAS 21
9-89

AUG 10 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC/ QA Coordinator Approval	
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OTHER : _____					

Picklist Print

Monday, June 05, 2017 9:30:31 AM

Page 1

Work Order ID: 162542

162542

Parent Item: D350-748-203

D350-748-203

Parent Item Name: AS350 / AS355 Stainless Steel Aft Crosstube

Start Date: 6/16/2017

Required Date: 6/30/2017

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 15.03.23 NEW ISSUE DD VERF;JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D350-748-243TRN		Manufactured	No			110	Each	3.0000	1	1			
D350-748-243TRN									**				
Crosstube Installation, High Aft													

JW 17.07-24

Location	Loc Qty	Loc Code
LG014	3	
144979	1	
151601	1	
151840	1	

D3502-1
D3502-1
Support

Manufactured No

220 Each 46.0000 2

**

DAS
41
9-89

AUG 03 2017

Location	Loc Qty	Loc Code
LG052	46	
150010	14	
150683	12	
158881	20	

D5123-7
D5123-7
Clamp Cushion

Manufactured No

220 Each 114.0000 2

**

DAS
41
9-89

AUG 03 2017

Location	Loc Qty	Loc Code
LG052	114	
151551	22	
153236	92	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																	
		OTHER :																							

Picklist Print

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Page 2

Work Order ID: 162542

162542

Parent Item: D350-748-203

D350-748-203

Parent Item Name: AS350 / AS355 Stainless Steel Aft Crosstube

Start Date: 6/16/2017

Required Date: 6/30/2017

Start Qty: 1.00

Required Qty: 1.00

AETC-1032

Purchased

No

220

Each

56.0000

1

1

DAS

AETC-1032

41

9-89

AUG 03 2017

Insert

Location

Loc Qty

Loc Code

LG050

6

m133732

6

st555

50

m137335

50

NAS1149C0363R

Purchased

No

220

Each

332.0000

1

1

DAS

NAS1149C0363R

41

9-89

AUG 03 2017

Washer

Location

Loc Qty

Loc Code

FP001

100

m133077

100

GA

16

m133077

16

ST260a

200

m137495

200

ST266

16

m136983

16

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Picklist Print

Monday, June 05, 2017 9:30:31 AM

Page 3

Work Order ID: 162542

162542

Parent Item: D350-748-203

D350-748-203

Parent Item Name: AS350 / AS355 Stainless Steel Aft Crosstube

Start Date: 6/16/2017

Required Date: 6/30/2017

Start Qty: 1.00

Required Qty: 1.00

MS21920-20

Purchased

No

220

Each

113.0000

2

2

DAS

41

9-89

AUG 03 2017

MS21920-20

Clamp

137710

Location

Loc Qty

Loc Code

FG

2

122254

2

LG050

109

m136740

9

m137361

50

m137587

50

LG056

2

m128650

1

m132675

1

DAS

41

9-89

AUG 03 2017

MS51958-63

Purchased

No

220

Each

90.0000

1

1

DAS

41

9-89

AUG 03 2017

MS51958-63

Screw

Location

Loc Qty

Loc Code

ST267

90

m134962

90

220

Each

1,337.000

8

8

DAS

41

9-89

AUG 03 2017

NAS1149D0563J

Purchased

No

NAS1149D0563J

Washer

Location

Loc Qty

Loc Code

GA

110

m135774

110

ST263

1227

m137361

227

m137587

1000

AUG 09 2017

DAS

27

9-89

DAS
28
9-89

Monday, June 05, 2017 9:30:31 AM

Shop Packet Print

Page 3

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER : ☐							

Picklist Print

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Page 4

Work Order ID: 162542

162542

Parent Item: D350-748-203

D350-748-203

Parent Item Name: AS350 / AS355 Stainless Steel Aft Crosstube

Start Date: 6/16/2017

Required Date: 6/30/2017

Start Qty: 1.00

Required Qty: 1.00

MS21042L4

Purchased

No

220

Each

3,053.000

24

24

MS21042L4

Nut

DAS
28
9-89

Location

Loc Qty

Loc Code

FP001

10

m133363

10

GA

51

m135058

51

OVER007

2400

m137402

400

m137544

1000

m137680

1000

ST303

592

m137371

592

AUG 09 2017

DAS
6
9-89

DAS
27
9-89

137988

MS21042L5

Purchased

No

220

Each

726.0000

4

4

MS21042L5

Nut

DAS
28
9-89

Location

Loc Qty

Loc Code

GA

12

m127813

12

ST303

714

m137361

14

m137478

200

m137587

500

AUG 09 2017

DAS
6
9-89

DAS
27
9-89

4

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

Picklist Print

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Work Order ID: 162542

162542

Parent Item: D350-748-203

D350-748-203

Parent Item Name: AS350 / AS355 Stainless Steel Aft Crosstube

Start Date: 6/16/2017

Required Date: 6/30/2017

Start Qty: 1.00

Required Qty: 1.00

AN4-41A Purchased No

220 Each 288.0000 8 8

AN4-41A

Bolt

**

DAS
6
9-89

AUG 0 9 2017

DAS
27
9-89

Location Loc Qty Loc Code

over003 241
m136851 40
m137320 40
m137464 41
m137544 120
ST342 47
m133769 7
m135978 40

DAS
28
9-89

D3501-1 Manufactured No

220 Each 189.0000 16 16

D3501-1

Bushing

**

DAS
6
9-89

AUG 0 9 2017

DAS
27
9-89

Location Loc Qty Loc Code

ST037 189
159311 189

DAS
28
9-89

NAS1149D0463J Purchased No

220 Each 4,900.000 32 32

NAS1149D0463J

Washer

**

DAS
6
9-89

AUG 0 9 2017

DAS
27
9-89

Location Loc Qty Loc Code

GA 40
M135056 40
ST260a 4000
M137371 2000
M137699 2000
ST263 860
M137544 860

DAS
28
9-89

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Shop Packet Print

Page 5

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
OTHER : ☐									

Picklist Print

Monday, June 05, 2017 9:30:31 AM

Page 6

Work Order ID: 162542

162542

Parent Item: D350-748-203

D350-748-203

Parent Item Name: AS350 / AS355 Stainless Steel Aft Crosstube

Start Date: 6/16/2017

Required Date: 6/30/2017

Start Qty: 1.00

Required Qty: 1.00

AN5-32A

Purchased No

220

Each

210.0000

4 4

AN5-32A

Bolt

DAS
28
9-89

Location

Loc Qty

Loc Code

over004

200

m137320

80

m137464

120

ST336

10

m136741

10

D3500-1

Manufactured No

220

Each

64.0000

4 4

D3500-1

Saddle

DAS
28
9-89

Location

Loc Qty

Loc Code

ST406

64

151743

4

152839

20

158741

40

AN4-6A

Purchased No

220

Each

755.0000

16 16

AN4-6A

BOLT

DAS
28
9-89

Location

Loc Qty

Loc Code

over003

600

M137464

600

ST345

155

M137178

3

M137320

152

DAS
6
9-89

AUG 09 2017
27
9-89

DAS
6
9-89

AUG 09 2017
DAS
27
9-89

DAS
6
9-89

AUG 09 2017
DAS
27
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

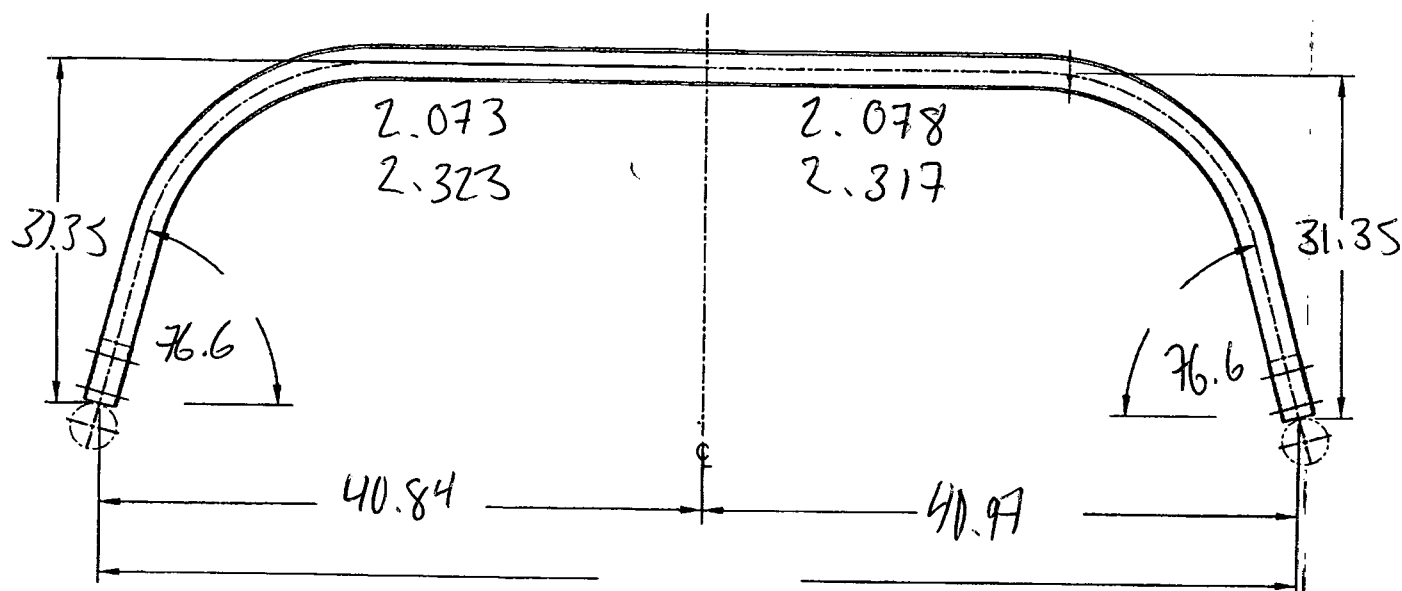
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition																					
								Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐																			

DART AEROSPACE LTD		Work Order: 162542
Description: Crosstube High Aft, SS (AS350/355)		Part Number: D350-748-203
Inspection Dwg: D350-748-243	Rev: A	Page 1 of 1

Required Dimension	Min	Max
Height	31.10	31.60
1/2 Span	40.77	41.03
Angle	75	77
Total Span	81.54	82.06
Bending Passes	7	--
Crushing	--	8%
Twist	--	0.38



	Side A	Side B
Bending Passes	38	38
Crushing	5.4%	5.4%
Comments		

QC15 Inspection	38
Date	JUL 25 2017

Rev	Date	Change	Revised by	Approved
A	15.09.09	New Issue	KJ	I



2015 MAR 18

15/1/20 OK
9/16/20

DESIGN	00	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D350-748-243 TITLE CROSSTUBE (AS 350/355 HI AFT) COPYRIGHT © 2015 BY DART AEROSPACE LTD THIS DOCUMENT IS RELEASED UNDER THE PATENT ACT AND IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	REV. A
DRAWN	00		SHEET 2 OF 2
CHECKED	A.P.		
MFG. APPR.	<i>[Signature]</i>		
APPROVED	<i>[Signature]</i>		SCALE
DE APPR.	<i>[Signature]</i>		NTS
DATE	15.01.21		



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO37253**

Purchase Order Date 7/28/2017
PO Print Date 7/28/2017

Page Number 3 of 5

Order From :
SKYSERVICE
6120 MIDFIELD ROAD
MISSISSAUGA, ONTARIO L5P 1B1
CANADA

VC-SKY001

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name
Vendor Phone 905-678-5636

Ship To Contact
Ship To Phone
Ship Via: Delivered
Ship Acct:

Buyer
Customer POID
Customer Tax # 10127-2607
Terms Net 30
Currency CAD
FOB FCA - (Free Carrier)

Line Total: **\$147.50**

/ 7	161177	D206-667-207BL	7/28/2017 Yes 7/28/2017	1.00	\$147.50	\$147.50
LIQUID PENETRANT INSPECTION AS PER QSI 038 OR LPI AS PER ASTM 1417 LEVEL 2						

Line Total: **\$147.50**

/ 8	161173	D206-667-207BL	7/28/2017 Yes 7/28/2017	1.00	\$147.50	\$147.50
LIQUID PENETRANT INSPECTION AS PER QSI 038 OR LPI AS PER ASTM 1417 LEVEL 2						

Line Total: **\$147.50**

/ 9	162542	D350-748-203	7/28/2017 Yes 7/28/2017	1.00	\$147.50	\$147.50
LIQUID PENETRANT INSPECTION AS PER QSI 038 OR LPI AS PER ASTM 1417 LEVEL 2						

817-731

Note:

7/28/2017

**skyservice****Work Order Traveler**
Sky Service F.B.O. Inc.

10105 Ryan Avenue, Dorval, Quebec, H9P 1A2

TCCA AMO 53-89 / EASA 145.7142 / BDA AMO 385

WO #: MWO32803	Customer: Dart Aerospace Ltd.	Dept: NDT YUL	Reference:
Descr:	PN:	S/N:	Qty: 1
Make:	Model:	Reg:	A/C S/N:
TSN:	CSN:	TSO:	
Task: UNSCHEDULED			Sequence: 1

Work Required:

CARRY OUT NDT INSPECTION (LIQUID PENETRANT) ON 12 CROSSTUBES

ITEM ID: D350-748-103 AS350/AS355 STAINLESS STEEL FWD CROSSTUBE (QTY2)

1 - WORK ORDER ID#: 159000

2 - WORK ORDER ID#: 158999

ITEM ID: D350-748-203 AS350/AS355 STAINLESS STEEL AFT CROSSTUBE (QTY2)

3 - WORK ORDER ID#: 162542

4 - WORK ORDER ID#: 162543

60 D-7-31

ITEM ID: D206-667-207BL AFT CROSSTUBE - MID HRIGHT 206L/L1/L3/L4, BLUE (QTY 4)

5 - WORK ORDER ID#: 161173

6 - WORK ORDER ID#: 161177

7 - WORK ORDER ID#: 161174

8 - WORK ORDER ID#: 161175

ITEM ID: D206-667-207BL AFT CROSSTUBE - MID HRIGHT 206L/L1/L3/L4, BLUE (QTY 4)

09 - WORK ORDER ID#: 162192

10 - WORK ORDER ID#: 162189

11 - WORK ORDER ID#: 162190

12 - WORK ORDER ID#: 162191

Action Taken:	Date:	Initial/Stamp:				
LIQUID PENETRANT INSPECTION CARRIED OUT ON ITEMS LISTED ABOVE (ITEMS 1-12) AS PER ASTM1417M-13 NO CRACK FOUND Pen: ZL-27A MWO5678 DEV: SKD-S2 MPO11715 CLEANER: SKC-S MPO13923	JUL 28 2017	DOT-APP 61 53-89				
Description	Location	P/N	Qty	Batch	S/N Off	S/N On

I certified that the maintenance described above has been performed in accordance with the applicable standard of airworthiness.

Signature:	ACA/SCA Stamp	Date:
	DOT-APP 61 53-89	JUL 28 2017
Name:	ANTONINO MARCHETTA	

Work Order ID 162542

162542

Monday, June 05, 2017 9:30:32 AM

Page 1

Item ID: D350-748-203

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: AS350 / AS355 Stainless Steel Aft Crosstube

Stop

NS2

Start Date: 6/16/2017 Start Qty: 1.00 *1*

Cust Item ID:

Required Date: 6/30/2017 Req'd Qty: 1.00 *1*

Customer:

Reference:

Approvals: Process Plan: Date: JUN 07 2017

Tooling:

Date:

Run Start

NR1

QC: Date: SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D350-748-243	A

AUG 09 2017

100 Document Control 0.00

100 DOCUMENT CONTROL

DAS

5

9-89

AUG 09 2017

DC Memo 0.00

Doc.Control -USB or Paperwork Photocopy bluefile & type labels per PPPD350-748-201 CHG001

110 BENDING MACHINE - CROSSTUBES 0.79

110

CNC Bend 2

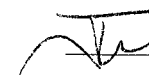
CNC Alpha 160 Bender

Memo 1.12

Bend tube as per Dwg D350-748-243 using CNC bender program D350A and Folio FT

*****UNDER BEND .225" PER SIDE*****

****USE (4) DT9824 SHIM BLOC TO CHECK STRAIGHTNESS****



17.07.25



Department of Transport

Supplemental Type Certificate

This approval is issued to:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, Ontario
Canada K6A 1K7

Number: SH06-27

Issue No.: 2

Approval Date: August 16, 2006

Issue Date: July 27, 2010

Responsible Office:

Prairie and Northern

Aircraft/Engine Type or Model:

EUROCOPTER FRANCE AS 350 B, B1, B2, B3, BA, D, D1
EUROCOPTER FRANCE AS 355 E, F, F1, F2, N, NP

Canadian Type Certificate or Equivalent:

EUROCOPTER FRANCE AS 350 Series: H-83
EUROCOPTER FRANCE AS 355 Series: H-87

Description of Type Design Change:

Crosstube Installation

**Installation/Operating Data,
Required Equipment and Limitations:**

Manufacture of the Crosstube Installation must be in accordance with Dart Aerospace Ltd. MDL-D350-748, Revision F, dated 2010-06-30, or later Transport Canada approved revision.

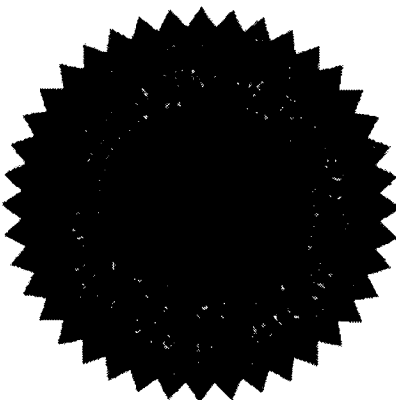
Installation of the Crosstube Installation must be in accordance with Dart Aerospace Ltd. IIN-D350-748, Revision B, dated 2007-06-15, or later Transport Canada approved revision.

Maintenance of the Crosstube Installation must be in accordance with Transport Canada accepted Dart Aerospace Ltd. ICA-D350-748, Revision 1, dated 2010-06-29, or later accepted revision.

Basis of Certification:

The basis of certification for this modification is FAR 27, up to and including Amendment 27-40 for the affected areas.

— End —



Conditions: This approval is only applicable to the type/model of aeronautical product specified therein. Prior to incorporating this modification, the installer shall establish that the interrelationship between this change and any other modification(s) incorporated will not adversely affect the airworthiness of the modified product.


Greg Oucharek
For Minister of Transport

Canada